

WHAT IS CLAIMED IS:

1. A GFP protein comprising the amino acid sequence set forth in SEQ ID No. 1 in the Sequence Listing, said sequence having at least mutations of 5 Phe64Leu, Val163Ala, and Ser175Gly.

2. A GFP protein comprising the amino acid sequence set forth in SEQ ID No. 1 in the Sequence Listing, said sequence having the three mutations of Phe64Leu, Val163Ala, and Ser175Gly.

10 3. A BFP protein comprising the amino acid sequence set forth in SEQ ID No. 1 in the Sequence Listing, said sequence having at least mutations of Y66H, Y145F, and Phe64Leu.

15 4. A BFP protein comprising the amino acid sequence set forth in SEQ ID No. 1 in the Sequence Listing, said sequence having at least mutations of Y66H, Y145F, Phe64Leu, and Leu236Arg.

20 5. A BFP protein comprising the amino acid sequence set forth in SEQ ID No. 1 in the Sequence Listing, said sequence having the four mutations of Y66H, Y145F, Phe64Leu, and Leu236Arg.

25 6. A BFP protein comprising the amino acid sequence set forth in SEQ ID No. 1 in the Sequence Listing, said sequence having at least mutations of Y66H, Y145F, Phe64Leu, Val163Ala, Ser175Gly and Leu236Arg.

7. A BFP protein comprising the amino acid sequence set forth in SEQ ID No. 1 in the Sequence Listing, said sequence having the six mutations of Y66H, Y145F, Phe64Leu, Val163Ala, Ser175Gly and 5 Leu236Arg.

8. A gene encoding the GFP protein according to claim 1.

9. A gene encoding the GFP protein according to claim 2.

10. A gene encoding the BFP protein according to claim 3.

11. A gene encoding the BFP protein according to claim 4.

12. A gene encoding the BFP protein according to claim 5.

13. A gene encoding the BFP protein according to claim 6.

14. A gene encoding the BFP protein according to claim 7.